

BEFORE THE STATE CORPORATION COMMISSION  
OF THE STATE OF KANSAS

In the Matter of the Application of Black Hills/ )  
Kansas Gas Utility Company, LLC, d/b/a Black )  
Hills Energy, For Approval of the Commission ) Docket No. 14-BHCG- -TAR  
For Gas System Reliability Surcharge Per K.S.A. )  
6-2201 through 66-2204 )

**DIRECT TESTIMONY OF JERRY A. WATKINS**

1 Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

2 A. My name is Jerry A. Watkins, and my business address is 2330 N. Hoover, Wichita,  
3 Kansas 67205.

4

5 Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

6 A. I am employed by Black Hills/Kansas Gas Utility Company, LLC, d/b/a Black Hills  
7 Energy (“Black Hills”) as Senior Manager of Technical Services for Kansas. In this  
8 capacity, I provide support and technical assistance for the management of  
9 operational and financial performance of Black Hills’ natural gas distribution and  
10 transmission assets in Kansas.

11

12 Q. PLEASE STATE YOUR EDUCATIONAL BACKGROUND AND BUSINESS  
13 EXPERIENCE.

14 A. I earned an Associates of General Studies degree from Friends University in 2008. I  
15 have completed several courses at the Wichita State University including a

1 Management Certificate from the W. Frank Barton School of Business. I have  
2 completed numerous courses related to natural gas technical operations sponsored by  
3 Black Hills and various industry organizations. Since joining the Arkansas Louisiana  
4 Gas Company in 1981, I have worked in the natural gas industry and held several  
5 operational positions. Included in the positions I have held, were those of Utility  
6 Service Technician, Operations Foreman, Lead Operations Technician, Wellhead  
7 Supply Representative, Operations Supervisor, Operations Manager and my current  
8 position as Senior Manager of Gas Technical Services.

9  
10 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

11 A. The purpose of my testimony is to support the eligibility of infrastructure system  
12 replacement projects and safety related projects included in Black Hills' proposed  
13 Gas System Reliability Surcharge (GSRS.) In addition to my testimony, Mr. Steven  
14 Peters provides direct testimony on the calculation of the GSRS revenue and the  
15 surcharge amounts by customer class.

16  
17 Q. ARE YOU SPONSORING ANY EXHIBITS?

18 A. Yes. I am sponsoring Exhibits JAW-1, JAW-2, and JAW-3. Exhibit JAW-1 is an  
19 index of the projects being included in this proposal. Exhibit JAW-2 is a more  
20 detailed summary of the projects. Exhibit JAW-3 is the supporting documentation  
21 for the specific projects and has been designated by Black Hills as containing  
22 confidential information.

23

1 Q. PLEASE BRIEFLY DESCRIBE BLACK HILLS' KANSAS GAS OPERATIONS.

2 A. Black Hills serves approximately 111,000 customers in 64 communities and in 48  
3 surrounding counties in Kansas. Operation centers are located in the major cities and  
4 towns served by Black Hills which include Lawrence, Wichita, Garden City, Dodge  
5 City, Liberal, and Goodland. Black Hills currently operates approximately 293 miles  
6 of transmission lines, 2,755 miles of distribution lines, and 98,940 services lines in  
7 Kansas.

8

9 Q. WHAT TYPES OF PROJECTS ARE INCLUDED IN BLACK HILLS' GSRS  
10 PROPOSAL?

11 A. Exhibit JAW-1 summarizes the projects being included in this GSRS proposal.  
12 There are two groups of projects being submitted. The first group is comprised of  
13 specific safety related system replacement projects and blanket work orders. The  
14 second group consists of governmentally mandated road relocation projects which  
15 have not been reimbursed to the natural gas utility. All of these types of projects are  
16 eligible for inclusion in a GSRS proposal.

17

18 Q. WHAT IS THE INCLUSION CRITERIA FOR THE SAFETY RELATED  
19 SYSTEM REPLACEMENT PROJECTS?

20 A. The inclusion criteria for the safety related projects, according to K.S.A. 66-2202, is  
21 as follows: "(1) Mains, valves, service lines, regulator stations, vaults and other  
22 pipeline system components installed to comply with state or federal safety  
23 requirements as replacements for existing facilities; (2) Main relining projects,

1 service line insertion projects, joint encapsulation projects and other similar projects  
2 extending the useful life or enhancing the integrity of pipeline system components  
3 undertaken to comply with state or federal safety requirements.”

4

5 Q. REGARDING GOVERNMENT MANDATED ROAD RELOCATIONS, WHAT IS  
6 THE INCLUSION CRITERIA FOR THESE PROJECTS?

7 A. The inclusion criteria for the road relocation projects, according to K.S.A. 66-2202,  
8 is as follows: “Facility relocations required due to construction or improvement of a  
9 highway, road, street, public right of way or other public work by or on behalf of the  
10 United States, this state, a political subdivision of this state or another entity having  
11 the power of eminent domain provided that the costs related to such projects have  
12 not been reimbursed to the natural gas utility.”

13

14 Q. ARE PROJECTS OTHER THAN SAFETY RELATED AND GOVERNMENT  
15 MANDATED ROAD RELOCATIONS MEETING THE INCLUSION CRITERIA  
16 LISTED ABOVE BEING INCLUDED IN THE GSRS PETITION?

17 A. No. Only projects meeting the two criteria previously mentioned are being  
18 submitted for consideration in this filing.

19

20 Q. CAN YOU EXPLAIN WHAT BLANKET WORK ORDERS WERE INCLUDED  
21 IN THE FILING?

22 A. Black Hills uses blanket work orders for smaller projects. Blanket work orders can  
23 include projects for system improvements, new customers, leasehold improvements,

1 and other general plant. However, only system improvement blankets have been  
2 included in this filing. System improvement blanket work orders include short  
3 distribution main, service line and yard line replacement projects. These types of  
4 projects typically eliminate leaking pipe and normally require immediate  
5 replacement. Projects included in this blanket are required to be less than \$10,000,  
6 but are normally less than \$5,000. Replacement lengths are typically less than 100'  
7 per project.

8  
9 Q. WHAT REGULATIONS WERE REFERENCED IN DETERMINING SAFETY  
10 RELATED PROJECT INCLUSION?

11 A. The referenced regulations are contained in 49 CFR Part 192, Transportation of  
12 Natural and Other Gas by Pipeline: Minimum Federal Safety Standards.

13  
14 Q. HOW DOES 192.453 PERTAIN TO THE GSRS FILING?

15 A. Paragraph (c) of the Kansas regulation requires operators to replace all unprotected  
16 bare steel service lines in a defined area once 25% of the service lines in the area  
17 have experienced leaks due to corrosion.

18  
19 Q. HOW DOES 192.485 PERTAIN TO THE GSRS FILING?

20 A. The regulation requires an operator to repair, replace, or reduce the operating  
21 pressure of a pipeline if localized pitting is found to a degree where leakage might  
22 result. Black Hills Energy replaced those sections of main or transmission line that  
23 had localized pitting corrosion or leakage due to localized corrosion.

1

2 Q. HOW DOES 192.487 PERTAIN TO THE GSRS FILING?

3 A. The regulation requires an operator to repair, replace, or reduce the operating  
4 pressure of a pipeline if localized pitting is found to a degree where leakage might  
5 result. Black Hills Energy replaced those sections of main or distribution line that  
6 had localized pitting corrosion or leakage due to localized corrosion.

7

8 Q. HOW DOES 192.605 PERTAIN TO THE GSRS FILING?

9 A. The regulation requires operators to prepare and follow a manual of written  
10 procedures for conducting operations and maintenance activities. Black Hills Energy  
11 follows this manual to identify and correct deficiencies within its system. Such  
12 deficiencies include pressure drop, gas quality, leak repairs and exposed lines.

13

14 Q. HOW DOES 192.613 PERTAIN TO THE GSRS FILING?

15 A. Continuing surveillance requires an operator to examine their system on an ongoing  
16 basis to determine and take appropriate action concerning changes in unusual  
17 operating conditions.

18

19 Q. HOW DOES 192.625 PERTAIN TO THE GSRS FILING?

20 A. The regulation requires operators to odorize its lines so gas is readily detectable by a  
21 person with a normal sense of smell. Paragraph (e) states that odorant must be  
22 introduced without wide variations in the level of odorant. Black Hills Energy  
23 replaced antiquated equipment to properly manage these variations.

1

2 Q. HOW DOES 192.739 PERTAIN TO THE GSRS FILING?

3 A. The regulation requires operators to inspect and test regulators and relief devices  
4 annually to ensure they are in good mechanical condition.

5

6 Q DOES BLACK HILLS UTILIZE A SYSTEM TO PRIORITIZE WHICH PIPE  
7 SEGMENTS REQUIRE REMEDIAL ACTIONS?

8 A. Yes, Black Hills uses a repair/replacement program for its long-term pipe  
9 replacements to rank projects utilizing a points system. An order of priority is given  
10 based on such factors including leak history, age of facility, proximity to the public,  
11 and several others. A Repair/Replacement Worksheet is completed to determine the  
12 replacement priority by a point system. This program is for long-term pipe  
13 replacements and is not used for emergency situations.

14

15 Q. ONCE IT IS DETERMINED THAT A PIPE SEGMENT REQUIRES REMEDIAL  
16 MEASURES, HOW DOES BLACK HILLS DETERMINE WHETHER THE  
17 SEGMENT SHOULD BE REPAIRED OR REPLACED?

18 A. Black Hills examines several factors on whether a segment should be repaired or  
19 replaced. In the projects submitted in our GSRS, pipe segments were replaced due to  
20 the existing pipe segment being of unapproved material, vintage of pipe, and  
21 historical leaks.

22

23 Q. WHAT IS UNAPPROVED MATERIAL?

1 A. Unapproved material is defined as material not tested per a recognized standard in  
2 Subpart A of 49 CFR Part 192, not approved for use by a specific section of the  
3 code, or not approved by Black Hills material standards. This can include cast iron,  
4 bare steel and polyvinyl chloride (PVC) pipe.

5

6 Q. HAVE YOU REVEIUED THE PROJECTS INCLUDED IN THE CURRENT  
7 GSRS FILING TO DETERMINE WHETHER THE FILING COMPLIES WITH  
8 THE PROVISIONS OF THE STIPULATION AND AGREEMENT (“S&A”)  
9 DATED JANUARY 31, 2008 IN DOCKET NO. 07-BHCG-1063-ACQ (“1063  
10 DOCKET”) RELATING TO BLACK HILLS’ FUTURE GSRS FILINGS WITH  
11 THE KANSAS CORPORATION COMMISSION (“COMMISSION”)?

12 A. Yes, I have. Article IX of the S&A in the 1063 Docket limited Black Hills’ GSRS  
13 filings during the rate case moratorium to projects defined under Section (f)(1) and  
14 (f)(3) under K.S.A. 66-2202. All projects in the current filing fall under either K.S.A.  
15 66-2202(f)(1) or (f)(3). Therefore, the current GSRS filing complies with the  
16 provisions of the S&A in the 1063 Docket.

17

18 Q. DOES THIS CONCLUDE YOUR TESTIMONY?

19 A. Yes it does.



**VERIFICATION**

STATE OF KANSAS                    )  
  ) ss:  
COUNTY OF SEDGWICK            )

I, JERRY A. WATKINS, being first duly sworn on oath, depose and state that I am the witness identified in the foregoing prepared direct testimony, that I have read the testimony and I am familiar with its contents, and that the facts set forth are true to the best of my knowledge, information and belief.

  
\_\_\_\_\_  
Jerry A. Watkins

SUBSCRIBED AND SWORN to before me this 17<sup>th</sup> day of June, 2014.

  
\_\_\_\_\_  
Notary Public

Appointment/Commission Expires: 9/16/17



Black Hills/Kansas Gas Utility Company, LLC							
d/b/a Black Hills Energy							
Safety Related Project Index Summary							
Project No.	Location	Project Description	Work Order Number	Project Open/Closed	Project Cost	Complete Date	Compliance Reference
1	Dodge City	9th Street & Elm Main Replacement	60020481	Closed	\$ 26,232	6/25/13	192.487, 192.613
2	Dodge City	9th Street & Elm Service Replacement	10048467	Closed	\$ 17,820	6/25/13	192.453, 192.613
3	Dodge City	Cortez & Sunnyside Main Replacement Montezuma	60020570	Closed	\$ 28,611	6/26/13	192.487, 192.613
4	Dodge City	Market Street Main Replacement	60020574	Closed	\$ 122,832	7/30/13	192.487, 192.613
5	Dodge City	Market Street Service Replacement	10048644	Closed	\$ 92,986	7/30/13	192.453, 192.613
6	Dodge City	Highway 50 Main Replacement	60020516	Closed	\$ 183,511	9/18/13	192.487, 192.613
7	Dodge City	Highway 50 Service Replacement	10048462	Closed	\$ 80,681	9/18/13	192.453, 192.613
8	Dodge City	Ninth & Division Main Replacement	60020644	Closed	\$ 27,999	9/24/13	192.487, 192.613
9	Dodge City	14th Street bare Main Replacement	60020922	Closed	\$ 13,620	10/1/13	192.487, 192.613
10	Dodge City	Enterprise 114 Road Main Replacement	60020936	Closed	\$ 113,231	12/17/13	192.487, 192.613
11	Dodge City	Smith & Hazel Main Replacement	60021001	Closed	\$ 28,527	1/16/14	192.487, 192.613
12	Dodge City	Prospect & Beeson Main Replacement	60021267	Closed	\$ 28,411	3/6/14	192.487, 192.613
13	Dodge City	DRS #1 Upgrade South Second Yard	10048463	Closed	\$ 3,628	9/1/13	192.739, 192.613
14	Dodge City	Ground Bed Replacement Montezuma	10047119	Closed	\$ 29,532	2/1/14	192.463, 192.613
15	Dodge City	Replace 2 Groundbeds Dodge City KS	10049011	Closed	\$ 35,920	11/1/2013	192.463, 192.613
16	Garden City	Hinemen & Central Main Replacement	60019234	Closed	\$ 39,946	6/27/13	192.487, 192.613
17	Garden City	Blanket Service Replacement	5215113133	Closed	\$ 68,413	3/31/14	192.453, 192.613
18	Garden City	Pats Drive Blanket Main Replacement	5215113134	Closed	\$ 5,808	11/13/12	192.487, 192.613
19	Garden City	2nd & Pine Main Replacement	60019713	Closed	\$ 27,160	12/10/12	192.487, 192.613
20	Garden City	Third Street & Prospect Main Replacement	60020878	Closed	\$ 21,594	10/8/13	192.487, 192.613
21	Garden City	DRS 18 Replacement	60019341	Closed	\$ 22,643	10/1/13	192.739, 192.613
22	Garden City	DRS 17 Replacement	60020122	Closed	\$ 4,401	3/1/13	192.739, 192.613
23	Goodland	9th & Caldwell Main & Service Replacement	60019863	Closed	\$ 15,138		192.453, 192.487, 192.613
24	Goodland	511 Broadway Main & Service Replacement	60019771	Closed	\$ 19,262		192.453, 192.487, 192.613
25	Goodland	Map 392 Main & Service Replacement	60018731	Closed	\$ 225,463		192.453, 192.487, 192.613
26	Goodland	5th & Caldwell Main Replacement	60020655	Closed	\$ 13,022		192.487, 192.613
27	Goodland	Blanket Main Replacement	5215116134	Closed			192.487, 192.613
28	Goodland	Clark & Caldwell Main Replacement	60019722	Closed	\$ 7,452		192.487, 192.613
29	Goodland	11th & Cherry Main Replacement	60019418	Closed	\$ 30,021		192.487, 192.613
30	Goodland	8th Street & Caldwell Main & Service Replacement	60020650	Closed	\$ 86,442		192.453, 192.487, 192.613
31	Goodland	8th & Main Main Replacement	60019501	Closed	\$ 3,872		192.487, 192.613
32	Goodland	Section 24,T5S,R41W, Main Replacement	60021523	Closed	\$ -		192.487, 192.613
33	Goodland	Section 33, T10S, R42W, Main Replacement	60020067	Closed	\$ 25,291		192.487, 192.613
34	Goodland	Section 28, T10S, R42W, Main Replacement	60020071	Closed	\$ 25,103		192.487, 192.613
35	Goodland	Section 20, T10S, R42W Main Replacement	60020072	Closed	\$ 22,068		192.487, 192.613
36	Goodland	Grant Jr. High School Main Replacement	60020660	Closed	\$ 43,191		192.487, 192.613
37	Goodland	8th & Caldwell Service Replacement	60020647	Closed	\$ 9,424		192.453, 192.613
38	Goodland	Blanket Service Replacement	5215116133	Closed			192.453, 192.613
39	Goodland	8th & Caldwell Phase 1 Main Replacement	60020633	Closed			192.487, 192.613
40	Goodland	8th & Cherry Main Replacement	60020639	Closed		10/16/13	192.487, 192.613
41	Lawrence	W. 25th St – Ridge Ct to Cedarwood Ave Main Replacement	60019614	Closed	\$ -	12/7/2012	192.487, 192.613
42	Lawrence	Kent Terrace & Cedarwood Dr Main Replacement	60020442	Closed	\$ 30,910	6/21/2013	192.487, 192.613
43	Lawrence	Naismith Dr – W. 19th St to W. 20th St Main Replacement	60019185	Closed	\$ 188,589	6/28/2013	192.487, 192.613
44	Lawrence	Blanket Service Replacement	5215099133	Closed	\$ 231,689	3/31/2014	192.453, 192.613
45	Liberal/Copeland	Blanket Service Replacement	5215105133	Closed	\$ 15,095		192.453, 192.613
46	Liberal/Elkhart	411 Baca Main Replacement	60021411	Closed	\$ 7,877	2/25/2014	192.487, 192.613
47	Liberal/Elkhart	842 Cosmos Main Replacement	60021009	Closed	\$ 7,788	10/11/2013	192.487, 192.613

Black Hills/Kansas Gas Utility Company, LLC							
d/b/a Black Hills Energy							
Safety Related Project Index Summary							
Project No.	Location	Project Description	Work Order Number	Project Open/Closed	Project Cost	Complete Date	Compliance Reference
48	Liberal/Elkhart	Sid And Stilman Main Replacement	60021541	Closed	\$ 369	3/26/2014	192.487, 192.613
49	Liberal/Elkhart	Blanket Service Replacement	5215109133	Closed	\$ 36,190		192.453, 192.613
50	Liberal/Fowler	511 Pine Main Replacement	60021414	Closed	\$ 7,161	2/26/2014	192.487, 192.613
51	Liberal/Fowler	Blanket Service Replacement	5215111133	Closed	\$ 910		192.453, 192.613
52	Liberal/Hugoton	DRS 1B Regulator Replacement	60021203	Closed	\$ 11,203	12/19/2013	192.739, 192.613
53	Liberal/Hugoton	Blanket Service Replacement	5215121133	Closed	\$ 47,305		192.453, 192.613
54	Liberal	2nd and Western Main Replacement	60019637	Closed	\$ 30,940	10/19/2012	192.487, 192.613
55	Liberal	607 W 1st Main Replacement	60020514	Closed	\$ 5,321	6/6/2013	192.487, 192.613
56	Liberal	Park and Virginia Main Replacement	60020567	Closed	\$ 1,123	6/13/2013	192.487, 192.613
57	Liberal	117 W Pancake Main Replacement	60020623	Closed	\$ 9,639	7/3/2013	192.487, 192.613
58	Liberal	2nd and Western Main Replacement	60020665	Closed	\$ 27,151	7/10/2013	192.487, 192.613
59	Liberal	609 W 2nd Main Replacement	60021522	Closed	\$ 4,504	3/21/2014	192.487, 192.613
60	Liberal	DRS 11 Regulator Replacement	60020913	Closed	\$ 3,119	9/6/2013	192.739, 192.613
61	Liberal	Blanket Service Replacement, Liberal	5215126133	Closed	\$ 188,400		192.453, 192.613
62	Liberal	Install Odorizer, Liberal	10049233	Closed	\$ 54,459		192.625, 192.613
63	Liberal	Install Regulator, Liberal	10049230	Closed	\$ 17,772	3/1/2014	192.739, 192.613
64	Liberal/Meade	Fowler and Rainbelt Main Replacement	60019544	Closed	\$ 20,250	10/4/2012	192.487, 192.613
65	Liberal/Meade	Webb and Hart Main Replacement	60020460	Closed	\$ 2,883	5/16/2013	192.487, 192.613
66	Liberal/Meade	Fowler and Kansas Main Replacement	60020863	Closed	\$ 10,232	8/30/2013	192.487, 192.613
67	Liberal/Meade	Blanket Service Replacement	5215128133	Closed	\$ 58,260		192.453, 192.613
68	Liberal/Moscow	Hwy 56 High School Road Main Replacement	60021213	Closed	\$ 3,996	12/18/2013	192.487, 192.613
69	Liberal/Moscow	Blanket Service Replacement	5215130133	Closed	\$ 8,973		192.453, 192.613
70	Liberal/Plains	Install Emergency Valves	60019778	Closed	\$ 780	11/19/2012	192.487, 192.613
71	Liberal/Plains	East 1st and Washington Main Replacement	60019788	Closed	\$ 22,037	11/29/2012	192.487, 192.613
72	Liberal/Plains	211 E Erie Main Replacement	60020893	Closed	\$ 11,368	9/6/2013	192.487, 192.613
73	Liberal/Plains	Blanket Service Replacement	5215136133	Closed	\$ 20,782		192.453, 192.613
74	Liberal/Satanta	402 Tonkawa Main Replacement	60021089	Closed	\$ 12,528	11/7/2013	192.487, 192.613
75	Liberal/Satanta	Blanket Service Replacement	5215138133	Closed	\$ 25,198		192.453, 192.613
76	Liberal/Sublette	202 E Hwy 56 Main Replacement	60021146	Closed	\$ 15,230	11/15/2013	192.487, 192.613
77	Liberal/Sublette	404 S Inman Main Replacement	60021215	Closed	\$ 4,926	12/20/2013	192.487, 192.613
78	Liberal/Sublette	1008 W Lalande Main Replacement	60021282	Closed	\$ 13,006	1/23/2014	192.487, 192.613
79	Liberal/Sublette	Blanket Service Replacement	5215142133	Closed	\$ 37,275		192.453, 192.613
80	Wichita	Tahoe & Arrowhead Main Replacement	60021341	Closed	\$ 38,942		192.487, 192.613
81	Wichita	Green & Estelle Main Replacement	60021276	Closed	\$ 34,794		192.487, 192.613
82	Wichita/Yoder	Red Rock Main Replacement	60021265	Closed	\$ 3,539		192.485, 192.613
83	Wichita/Hutchinson	56th & Pennington Main Replacement	60021212	Closed	\$ 27,757		192.485, 192.613
84	Wichita/Winfield	Line 27 Main Replacement	60020968	Closed	\$ 32,380		192.487, 192.613
85	Wichita	Gow - 10th to 11th Main Replacement	60020901	Closed	\$ 20,300		192.487, 192.613
86	Wichita	17th & Arkansas Main Replacement	60020844	Closed	\$ 19,854		192.487, 192.613
87	Wichita	Baehr - 9th to Elm Main Replacement	60020705	Closed	\$ 40,418		192.487, 192.613
88	Wichita	19th & Woodland Main Replacement	60020614	Closed	\$ 16,827		192.487, 192.613
89	Wichita	Buffum & Franklin Main Replacement	60020546	Closed	\$ 23,251		192.487, 192.613
90	Wichita/Sterling	4th & Monroe Main Replacement	60020404	Closed	\$ 17,712		192.487, 192.613
91	Wichita	Bebe - Central to Newell Main Replacement	60020370	Closed	\$ 9,263		192.487, 192.613
92	Wichita	Spaulding - Franklin to Murdock Main Replacement	60020358	Closed	\$ 26,576		192.487, 192.613
93	Wichita	Doris & 13th Main Replacement	60020335	Closed	\$ 9,809		192.487, 192.613
94	Wichita	Hoover - 9th to Robinson Main Replacement	60020326	Closed	\$ 14,812		192.487, 192.613

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Safety Related Project Index Summary							
Project No.	Location	Project Description	Work Order Number	Project Open/Closed	Project Cost	Complete Date	Compliance Reference
95	Wichita	Sedgwick - 14th to 15th Main Replacement	60020297	Closed	\$ 14,813		192.487, 192.613
96	Wichita	Broadway & Orme Main Replacement	60020133	Closed	\$ 438		192.487, 192.613
97	Wichita/Obeeville	Obee & G Ave Main Replacement	60020120	Closed	\$ 13,109		192.487, 192.613
98	Wichita	Pleasantview - 15th to 16th Main Replacement	60020097	Closed	\$ 28,486		192.487, 192.613
99	Wichita/Colwich	4th & Breese Main Replacement	60020028	Closed	\$ 21,059		192.487, 192.613
100	Wichita/Hutchinson	50th & Pennington Main Replacement	60019989	Closed	\$ 25,582		192.485, 192.613
101	Wichita	2nd & Santa Fe DRS Replacement	60020689	Closed	\$ 68,161		192.739, 192.613
102	Wichita	13th & Zoo DRS Replacement	60020714	Closed	\$ 16,745		192.739, 192.613
103	Wichita	Irving & West DRS Replacement	60020715	Closed	\$ 13,453		192.739, 192.613
104	Wichita/Hutchinson	McNew DRS Replacement	60020941	Closed	\$ 34,827		192.739, 192.613
105	Wichita/Peck	Peck DRS Replacement	60020950	Closed	\$ 25,405		192.739, 192.613
106	Wichita/Americus	Americus DRS Replacement	60021102	Closed	\$ 8,658		192.739, 192.613
107	Wichita/Sterling	T1Z Sterling Main Replacement	10047949	Closed	\$ 859,050		192.485, 192.613
108	Wichita	29th & Tyler DRS Replacement	60019514	Closed	\$ 19,643		192.739, 192.613
109	Wichita	Pawnee & West DRS Replacement	60020017	Closed	\$ 2,938		192.739, 192.613
110	Wichita/Andale	Andale DRS Replacement	60019130	Closed	\$ 47,752		192.739, 192.613
111	Wichita	Blanket Service Replacement	5215132133	Closed			192.453, 192.613
112	Wichita	Blanket Main Replacement	5215132134	Closed	\$ 12,736		192.487, 192.613
113	Wichita	25% Bare Service Replacement	60019579	Closed	\$ 54,560		192.453, 192.613
114	Wichita	Litchfield - Franklin to Murdock Main Replacement	60019489	Closed	\$ 21,952		192.487, 192.613
115	Wichita	Litchfield - Franklin to Murdock Service Replacement	60019488	Closed	\$ 19,038		192.453, 192.613
116	Wichita/Hutchinson	T1Z S30 Main Replacement	10044976	Closed	\$ 58,183		192.485, 192.613
117	Wichita/Nickerson	T1A S11 & S22 Main Replacement	10047717	Closed	\$ 244,120		192.485, 192.613
118	Wichita/Cheney	Vulcan Line Main Replacement	10047149	Closed	\$ 53,370		192.487, 192.613
119	Wichita/Wellington	T1Z Wellington S30 & S31 Main Replacement	10048988	Closed	\$ 346,125		192.485, 192.613
120	Wichita	T1Z Wichita S24 Main Replacement	10048989	Closed	\$ 52,199		192.485, 192.613
121	Wichita/Winfield	Line 27 Main Replacement	10044821	Closed	\$ 25,192		192.487, 192.613
122	Wichita/Colwich	T1Z Colwich Exposure Main Replacement	10045157	Closed	\$ 70,497		192.485, 192.613
123	Wichita	Levee D Crossing Replacement	10046935	Closed	\$ 131,799		192.485, 192.613
124	Wichita	T1Z Junction 55th St.	10043823	Closed	\$ 170,570		192.485, 192.613
125	Wichita/Sterling	T1A to T1Z Service Tie Overs	10048575	Closed	\$ 47,313		192.485, 192.613
126	Wichita/Cheney	Install odorizer at Cheney Plant	10047871	Closed	\$ 46,622		192.625, 192.613
127	Wichita/Sterling	Install odorizer at Sterling Compressor	10047872	Closed	\$ 44,795		192.625, 192.613
128	Wichita/Hesston	Install odorizer at Hesston Interconnect	10047900	Closed	\$ 22,286		192.625, 192.613
129	Wichita/Sterling	Sterling Ground bed Replacement	10048413	Closed	\$ 3,293		192.463, 192.613
130	Wichita/Sterling	Sterling Feeder Junction Tie Over	10048593	Closed	\$ 52,623		192.485, 192.613
131	Wichita/Lyons	North American Salt Tie Over	10048750	Closed	\$ 45,066		192.485, 192.613
132	Wichita/Nickerson	Install Odorizer at Gossage	10048805	Closed	\$ 47,205		192.625, 192.613
133	Wichita/Maize	Rectifier #44 Replacement	10049199	Closed	\$ 4,372		192.463, 192.613
134	Wichita/Maize	Rectifier #45 Replacement	10049200	Closed	\$ 5,004		192.463, 192.613
135	Wichita/Sterling	Rectifier #36 Replacement	10049201	Closed	\$ 4,835		192.463, 192.613
136	Wichita/S Haven	South Haven Ground bed Installation	10049205	Closed	\$ 9,047		192.463, 192.613
137	Wichita/Wellington	Wellington Ground bed Installation	10049226	Closed	\$ 8,961		192.463, 192.613
138	Wichita/Hesston	Hesston Valve Replacement	10049510	Closed	\$ 17,596		192.485, 192.613
					<b>\$ 5,900,205</b>		



**SUMMARY OF SAFETY RELATED & RELOCATION PROJECTS**  
June 2014

**Safety Related Projects**

- Project summary includes the primary and, where applicable, a secondary, complimentary regulation requirement (49 CFR Part 192 and Kansas Administrative Regulation (K.A.R.)) that mandated replacement or other action.
- Yard Lines: Black Hills' policy regarding yard line replacement complies with 192.453 General. (K.A.R. 82-11-4(k)). Additionally, upon repair of a leak where the cause was undetermined, it is documented to be corrosion, to be the most conservative in terms of more quickly triggering replacement in an area and as per KCC Pipeline Safety Staff's guidance.
- Transmission & Distribution Replacement Program: Black Hills' policy regarding a repair/replacement program complies with 192.465 External corrosion control: Monitoring. (K.A.R. 82-11-4(q)). More specifically, Black Hills' Repair/Replacement Program is prioritized by leak history, segment material, leak potential, and potential hazard that leaks may cause. Systems are divided into segments (over 500 ft but less than 5,280 ft of the same material and age) and evaluated to determine a replacement priority by a point system. The minimum point threshold for main replacements in Kansas is 500 points. Main segments rated below 500 points may be replaced at Black Hills' discretion based on additional safety factors and/or business considerations.

➤ **Project Summaries (Safety Related)**

<b>SR-1: 9<sup>th</sup> Street and Elm Street Main Replacement, Dodge City (WO #60020481)</b>
Comments: This main replacement project eliminated 524' of 2" bare steel main that was installed prior to 1950. Records indicate one class 2 leak was repaired on this section of pipe over the past five years. Additionally, the main was located under hard surface material. The project starting and ending points were determined by the by the location of the first known problem area with additional footage required to find adequate tie-in points. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 754' of 2" PE pipe and tied into existing PE pipe. Additional footage was due to long service lines on Elm that were replaced with 2" PE main.  Repair/Replacement Program points for this segment of line were 400.
<b>SR-2: 9<sup>th</sup> &amp; Elm Street Service Replacement, Dodge City (WO #10048467)</b>
Comments: In conjunction with the above noted main replacement (SR-1), 10 service lines and/or yard lines were either replaced or tied over to the new main. All bare steel service and/or yard lines were replaced with 1/2" PE pipe.

**SR-3: Cortez & Sunnyside Main Replacement, Dodge City (Montezuma) (WO #60020570)**

Comments: This main replacement project eliminated 449' of 2" bare steel main that was installed prior to 1950. The main was located under hard surface material and ran parallel to the Montezuma Elementary School crossing the playground. The project starting and ending points were determined by the by the location of the first known problem area with additional footage required to find adequate tie-in points. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 449' of 2" PE pipe and tied into existing coated and bare steel pipe.

Repair/Replacement Program points for this segment of line were 430.

**SR 4: Market Street Main Replacement Dodge City (WO #60020574)**

Comments: This main replacement project eliminated 1,277' of 2" bare steel main that was installed prior to 1950. Records indicate one class 1 leak was repaired on this section of pipe over the past five years. Additionally, the main was located under hard surface material. The project starting and ending points were determined by the by the location of the first known problem area with additional footage required to find adequate tie-in points. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 1,277' of 2" PE pipe and tied into existing coated steel pipe.

Repair/Replacement Program Points for this segment of line were 400.

**SR 5: Market Street Service Replacement. Dodge City (WO #10048644)**

Comments: In conjunction with the above noted main replacement (SR-4), 20 service lines and/or yard lines were either replaced or tied over to the new main. All bare steel service and/or yard lines were replaced with 1/2" PE pipe.

**SR-6: Highway 50 Bypass Main Replacement, Dodge City (WO #60020516)**

Comments: This main replacement project eliminated 4,042' of 4" PVC main with an unknown installation date. The main was extremely shallow, not locatable (no tracer wire), and we were not able to stopple the line to interrupt service. The project starting and ending points were determined by the by the location of the first known problem area with additional footage required to find adequate tie-in points. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 4,042' of 4" and 435' of 2" PE pipe and tied into existing steel pipe.

Repair/Replacement Program points for this segment of line were 330.

**SR-7: Highway 50 Bypass, Service Replacement, Dodge City (WO #10048462)**

Comments: In conjunction with the above noted main replacement (SR-6), 7 service lines and/or yard lines were either replaced or tied over to the new main. All PVC service and/or yard lines were replaced with 1/2" PE pipe.

**SR-8: Ninth and Division Street Main Replacement Dodge City (WO #60020644)**

Comments: This main replacement project eliminated 210' of 2" coated steel main installed between 1950 & 1970. The main was under hard surface material and only 6" deep. The project starting and ending points were determined by the by the location of the first known problem area with additional footage required to find adequate tie-in points. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 210' of 2" PE pipe and tied into existing PE and coated steel pipe.

Repair/Replacement Program points for this segment of line were 350.

**SR-9: 14<sup>th</sup> Street Main Replacement, Dodge City (WO #60020922)**

Comments: This main replacement project eliminated 470' of 2" bare steel main that was installed prior to 1950. Records indicate one class 2 leak was repaired on this section of pipe over the past five years. The project starting and ending points were determined by the by the location of the first known problem area with additional footage required to find adequate tie-in points. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 470' of 2" PE pipe and tied into existing PE pipe.

Repair/Replacement Program points for this segment of line were 410.

**SR-10: Enterprise 114 Road Main Replacement Dodge City (WO #60020936)**

Comments: This main replacement project eliminated 8,300' of 3" PVC main that was installed prior to 1950. Records indicate two class 3 leaks were repaired on this section of pipe over the past five years and the line was extremely shallow. The project starting and ending points were determined by the by the location of the first known problem area with additional footage required to find adequate tie-in points. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 8,184' of 4" and 116' of 2" PE pipe and tied into existing PE and PVC pipe.

Repair/Replacement Program points for this segment of line were 310.

**SR-11: Smith and Hazel Main Replacement Dodge City (WO #60021001)**

Comments: This main replacement project eliminated 602' of 2" bare steel main that was installed prior to 1950. Records indicate one class 2 leak was repaired on this section of pipe over the past five years. Additionally, the main was located under hard surface material. The project starting and ending points were determined by the by the location of the first known problem area with additional footage required to find adequate tie-in points. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 602' of 2" PE pipe and tied into existing PE and coated steel pipe.

Repair/Replacement Program points for this segment of line were 430.



SR-12: Prospect & Beeson Main Replacement Dodge City (WO #60021267)
Comments: This main replacement project eliminated 670' of 2" bare steel main that was installed prior to 1950. Records indicate localized corrosion, pitting and the main was located under hard surface material. The project starting and ending points were determined by the by the location of the first known problem area with additional footage required to find adequate tie-in points. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 670' of 2" PE pipe and tied into existing PE and coated steel pipe.
Repair/Replacement Program points for this segment of line were 430.
SR-13; DRS #1 Upgrade South Second Yard Dodge City (WO #10048463)
Comments: This replacement eliminated one old DRS and replaced it with a standard monitor type setting. The obsolete regulator had lock up and set point problems and parts were no long available.
SR-14: Ground Bed Replacement, Dodge City (Montezuma) (WO #10047119)
Comments: Replaced ground bed installed in the 1970's. This ground bed protects the 8" bare steel line that feeds Montezuma.
SR-15: Ground Bed Replacement (2) Dodge City (WO #10049011)
Comments: Replace two ground beds installed in the 1970's to protect gas main under hard surface that feeds downtown Dodge City and the Wilroads area.
SR-16: Hineman Drive & Center Street Main Replacement, Garden City (WO #60019234)
Comments: This main replacement project eliminated 1,051' of 2" PVC main installed between 1950 & 1970. The main was located under hard surface material, not locatable (no tracer wire), and located in a residential neighborhood. The project starting and ending points were determined by the by the location of the first known problem area with additional footage required to find adequate tie-in points. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 838' of 2" PE pipe and tied into existing coated steel pipe.
Repair/Replacement Program points for this segment of line were 350.
SR-17: Blanket Service Replacement Garden City (WO #5215113133)
Comments: This blanket work order is for the replacement of services and yard lines. These types of projects typically eliminate leaking pipe and require immediate replacement. The 48 GSR replacements included in this filing are from November 01, 2012 through April 30, 2014.
SR-18: Pats Drive Blanket Main Replacement, Garden City (WO #5215113134)
Comments: This main replacement project eliminated 190' of 2" coated steel main that was installed prior to 1970. Records indicate the line was extremely shallow and located under hard surface material. The project starting and ending points were determined by the by the location of the first known problem area with additional footage required to find adequate tie-in points. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 188' of 2" PE pipe and tied into existing coated steel pipe.
Repair/Replacement Program points for this segment of line were 310.

SR-19: 2 <sup>nd</sup> & Pine Street Main Replacement Garden City (WO #60019713)
<p>Comments: This main replacement project eliminated 128' of 4" and 532' of 2" bare steel main that was installed prior to 1950. Records indicated localized corrosion was present and the line was located under hard surface material. The project starting and ending points were determined by the by the location of the first known problem area with additional footage required to find adequate tie-in points. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 128' of 4" and 532' of 2" PE pipe and tied into existing PE pipe.</p> <p>Repair/Replacement Program points for this segment of line were 430.</p>
SR-20: Third Street & Prospect Main Replacement Garden City (WO #60020878)
<p>Comments: This main replacement project eliminated 665' of 2" bare steel main that was installed prior to 1970. Records indicated localized corrosion was present and the line was located under hard surface material. The project starting and ending points were determined by the by the location of the first known problem area with additional footage required to find adequate tie-in points. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 665' of 2" PE pipe and tied into existing PE, coated and bare steel pipe.</p> <p>Repair/Replacement Program points for this segment of line were 430.</p>
SR-21: DRS 18 Replacement Garden City (WO #60019341)
<p>Comments: This replacement eliminated one old DRS and replaced it with a standard type setting. The obsolete regulator had lock up and set point problems and parts were no long available.</p>
SR-22: DRS 17 Replacement Garden City (WO #60020122)
<p>Comments: This replacement eliminated one old DRS and replaced it with a standard type setting. The obsolete regulator had lock up and set point problems and parts were no long available.</p>
SR-23: 9 <sup>th</sup> and Caldwell Main & Service Replacement, Goodland (WO #60019863)
<p>Comments: This main replacement project eliminated 280' of 2" bare steel main and 4 service and yard lines that were installed prior to 1950. Records indicate two class 1 and three class 2 leaks were repaired on this section of pipe over the past five years. Additionally, the main was located under hard surface material. The project starting and ending points were determined by the by the location of the first known problem area with additional footage required to find adequate tie-in points. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 280' of 2" PE pipe and tied into existing coated steel pipe.</p> <p>Repair/Replacement Program points for this segment of line were 550.</p>

**SR-24: 511 Broadway Main & Service Replacement, Goodland (WO #60019771)**

Comments: This main replacement project eliminated 320' of 2" bare steel main and 4 service and yard lines that were installed prior to 1950. Records indicate two class 2 and six class 3 leaks were repaired on this section of pipe over the past five years. Additionally, the main was located under hard surface material. The project starting and ending points were determined by the by the location of the first known problem area with additional footage required to find adequate tie-in points. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 320' of 2" PE pipe and tied into existing coated steel pipe.

Repair/Replacement Program points for this segment of line were 520.

**SR-25: Map 392 Main & Service Replacement, Goodland (WO #60018731)**

Comments: This main replacement project eliminated 5,900' of 2" bare steel main and 95 service and yard lines that were installed prior to 1950. Records indicate two class 1, three class 2, and six class 3 leaks were repaired on this section of pipe over the past five years. Additionally, the main was located under hard surface material. This map also triggered on the 25% bare service/yard line replacement requirement. The project starting and ending points were determined by the by the location of the first known problem area with additional footage required to find adequate tie-in points. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 5,900' of 2" PE pipe and tied into existing coated steel pipe.

Repair/Replacement Program points for this segment of line were 620.

**SR-26 5<sup>th</sup> and Caldwell Main Replacement, Goodland (WO #60020655)**

Comments: This main replacement project eliminated 400' of 2" bare steel main that was installed prior to 1950. Records indicate one class 1, two class 2, and five class 3 leaks were repaired on this section of pipe over the past five years. Additionally, the main was located under hard surface material. The bare steel line also ran parallel to the bowling alley only 10' away from the foundation. The project starting and ending points were determined by the by the location of the first known problem area with additional footage required to find adequate tie-in points. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 412' of 2" PE pipe and tied into existing PE and bare steel pipe.

Repair/Replacement Program points for this segment of line were 530.

**SR-27 Blanket Main Replacement, Goodland (WO #5215116134)**

Comments: This main replacement project eliminated 10,591' of 2" bare steel main in 15 locations that was installed prior to 1950. The project starting and ending points were determined by the by the location of the first known problem area with additional footage required to find adequate tie-in points. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 10,591' of 2" PE pipe and tied into existing steel pipe.

**SR-28: Clark and Caldwell Main Replacement, Goodland (WO #60019722)**

Comments: This main replacement project eliminated 70' of 2" bare steel main that was installed prior to 1950. Records indicate one class 1 and one class 2 leaks were repaired on this section of pipe over the past five years. Additionally, the main was located under hard surface material. The project starting and ending points were determined by the by the location of the first known problem area with additional footage required to find adequate tie-in points. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 70' of 2" PE pipe and tied into existing bare steel pipe.

Repair/Replacement Program points for this segment of line were 450.

**SR-29: 11<sup>th</sup> & Cherry Main Replacement, Goodland (WO #60019418)**

Comments: This main replacement project eliminated 530' of 3" bare steel main that was installed prior to 1950. Records indicate one class 1 and two class 2, and six class 3 leaks were repaired on this section of pipe over the past five years. Additionally, the main was located under hard surface material. The project starting and ending points were determined by the by the location of the first known problem area with additional footage required to find adequate tie-in points. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 530' of 2" PE pipe and tied into existing PE and bare steel pipe.

Repair/Replacement Program points for this segment of line were 520.

**SR-30: 8<sup>th</sup> Street & Caldwell Main & Service Replacement, Goodland (WO #60020650)**

Comments: This main replacement project eliminated 620' of 2" bare steel main and 10 services and yard lines that were installed prior to 1950. Records indicate two class 2 and six class 3 leaks were repaired on this section of pipe over the past five years. Additionally, the main was located under hard surface material. The project starting and ending points were determined by the by the location of the first known problem area with additional footage required to find adequate tie-in points. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 620' of 2" PE pipe and tied into existing PE pipe.

Repair/Replacement Program points for this segment of line were 490.

**SR-31: 8<sup>th</sup> & Main Main Replacement, Goodland (WO #60019501)**

Comments: This main replacement project eliminated 26' of 4" bare steel main that was installed prior to 1950. Records indicate one class 1, two class 2, and six class 3 leaks were repaired on this section of pipe over the past five years. Additionally, the main was located under hard surface material. The project starting and ending points were determined by the by the location of the first known problem area with additional footage required to find adequate tie-in points. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 26' of 4" PE pipe and tied into existing PE pipe.

Repair/Replacement Program points for this segment of line were 540.

**SR-32: Section 24, T5S, R41W Main Replacement, Goodland (WO #60021523)**

Comments: This main replacement project eliminated 5,324' of 2" PVC main that was installed prior to 1970. Records indicate one class 2, and fourteen class 3 leaks were repaired on this section of pipe over the past five years. The project starting and ending points were determined by the by the location of the first known problem area with additional footage required to find adequate tie-in points. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 5,324' of 2" PE pipe and tied into existing PVC pipe.

Repair/Replacement Program points for this segment of line were 440.

**SR-33: Section 33, T10S, R42W Main Replacement, Goodland (WO #60020067)**

Comments: This main replacement project eliminated 5,280' of 2" PVC main that was installed prior to 1970. Records indicate thirty one class 3 leaks were repaired on this section of pipe over the past five years. The project starting and ending points were determined by the by the location of the first known problem area with additional footage required to find adequate tie-in points. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 5,280' of 2" PE pipe and tied into existing PVC pipe.

Repair/Replacement Program points for this segment of line were 560.

**SR-34: Section 28, T10S, R42W Main Replacement, Goodland (WO #60020071)**

Comments: This main replacement project eliminated 5,280' of 2" PVC main that was installed prior to 1970. Records indicate thirty class 3 leaks were repaired on this section of pipe over the past five years. The project starting and ending points were determined by the by the location of the first known problem area with additional footage required to find adequate tie-in points. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 5,280' of 2" PE pipe and tied into existing PE and PVC pipe.

Repair/Replacement Program points for this segment of line were 550.

**SR-35: Section 20, T10S, R42W Main Replacement, Goodland (WO #60020072)**

Comments: This main replacement project eliminated 4,042' of 2" PVC main that was installed prior to 1970. Records indicate twenty four class 3 leaks were repaired on this section of pipe over the past five years. The project starting and ending points were determined by the by the location of the first known problem area with additional footage required to find adequate tie-in points. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 4,042' of 2" PE pipe and tied into existing PE and PVC pipe.

Repair/Replacement Program points for this segment of line were 510.

**SR-36: Grant Jr. High School Main Replacement, Goodland (WO #60020660)**

Comments: This main replacement project eliminated 1,358' of 2" bare steel main that was installed prior to 1950. Records indicate two class 1 and three class 3 leaks were repaired on this section of pipe over the past five years. Additionally, the main was located under hard surface material. The project starting and ending points were determined by the by the location of the first known problem area with additional footage required to find adequate tie-in points. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 1,358' of 2" PE pipe and tied into existing PE and bare steel pipe.

Repair/Replacement Program points for this segment of line were 520.

**SR-37: 8<sup>th</sup> & Caldwell Service Replacements, Goodland (WO #60020647)**

Comments: In conjunction with the above noted main replacement (SR-30), 38 service lines and/or yard lines were either replaced or tied over to the new main. All bare steel service and/or yard lines were replaced with ½" PE pipe.

**SR-38: Blanket Service Replacements, Goodland (WO #5215116133)**

Comments: This blanket work order is for the replacement of services and yard lines. These types of projects typically eliminate leaking pipe and require immediate replacement. The 287 replacements including in this filing are from November 1, 2012 through April 30, 2014.

**SR-39: 8<sup>th</sup> & Caldwell Phase 1 Main Replacement, Goodland (WO #60020633)**

Comments: This main replacement project eliminated 1,990' of 2" bare steel main that was installed prior to 1950. Records indicate one class 1 and three class 3 leaks were repaired on this section of pipe over the past five years. Additionally, the main was located under hard surface material. The project starting and ending points were determined by the by the location of the first known problem area with additional footage required to find adequate tie-in points. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 2,940' of 2" PE pipe and tied into existing PE and coated steel pipe.

Repair/Replacement Program points for this segment of line were 450.

**SR-40: 8<sup>th</sup> & Cherry Main Replacement, Goodland (WO #60020639)**

Comments: This main replacement project eliminated 620' of 2" bare steel main that was installed prior to 1950. Records indicate two class 2 and six class 3 leaks were repaired on this section of pipe over the past five years. Additionally, the main was located under hard surface material. The project starting and ending points were determined by the by the location of the first known problem area with additional footage required to find adequate tie-in points. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 620' of 2" PE pipe and tied into existing PE pipe.

Repair/Replacement Program points for this segment of line were 490.

**SR-41: W.25thSt – Ridge Ct to Cedarwood Ave Main Repl, Lawrence (WO #60019614)**

Comments: This main replacement project eliminated 620' of 2" bare steel main that was installed prior to 1960. Records indicate one class 3 leak was repaired on this section of pipe over the past five years. The project starting and ending points were determined by the by the location of the first known problem area with additional footage required to find adequate tie-in points. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 620' of 2" PE pipe and tied into existing PE and coated steel pipe.

Repair/Replacement Program points for this segment of line were 310.

SR-42: Kent Terrace & Cedarwood Ave Main Replacement, Lawrence (WO #60020442)
<p>Comments: This main replacement project eliminated 396' of 2" bare steel main that was installed prior to 1960. Records indicate one class 2 leak was repaired on this section of pipe over the past five years. The project starting and ending points were determined by the by the location of the first known problem area with additional footage required to find adequate tie-in points. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 396' of 2" PE pipe and tied into existing PE and coated steel pipe.</p> <p>Repair/Replacement Program points for this segment of line were 330.</p>
SR-43: Naismith Dr – W. 19th St to W. 20th St Main Replacement, Lawrence (WO #60019185)
<p>Comments: This main replacement project eliminated 790' of 8" bare steel coupled main that was installed prior to 1960. Records indicate two class 1, one class 2, and 1 class 3 leaks were repaired on this section of pipe over the past five years. The project starting and ending points were determined by the by the location of the first known problem area with additional footage required to find adequate tie-in points. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 790' of 8" coated steel pipe and tied into existing coated and bare steel pipe.</p> <p>Repair/Replacement Program points for this segment of line were 440.</p>
SR-44: Blanket Service Replacement, Lawrence (WO #5215099133)
<p>Comments: This blanket work order is for the replacement of services and yard lines. These types of projects typically eliminate leaking pipe and require immediate replacement. The 144 GSR replacements included in this filing are from November 01, 2012 through April 30, 2014.</p>
SR-45: Blanket Service Replacement, Liberal/Copeland (WO #5215105133)
<p>Comments: This blanket work order is for the replacement of services and yard lines. These types of projects typically eliminate leaking pipe and require immediate replacement. The 4 GSR replacements included in this filing are from November 01, 2012 through April 30, 2014.</p>
SR-46: 411 Baca Main Replacement, Liberal/Elkhart (WO #60021411)
<p>Comments: This main replacement project eliminated 92' of 2" bare steel main that was installed prior to 1970. Records indicate 1 class 3 leak was repaired on this section of pipe over the past five years. The project starting and ending points were determined by the by the location of the first known problem area with additional footage required to find adequate tie-in points. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 92' of 2" PE pipe and tied into existing bare steel pipe.</p> <p>Repair/Replacement Program points for this segment of line were 290.</p>
SR-47: 842 Cosmos Main Replacement. Liberal/Elkhart (WO# 60021009)
<p>Comments: This main replacement project eliminated 190' of 2" bare steel main that was installed prior to 1970. Records indicate 1 class 2 leak was repaired on this section of pipe over the past five years. The project starting and ending points were determined by the by the location of the first known problem area with additional footage required to find adequate tie-in points. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 190' of 2" PE pipe and tied into existing coated and bare steel pipe.</p> <p>Repair/Replacement Program points for this segment of line were 310.</p>

SR-48: Sid and Stilman Main Replacement, Liberal/Elkhart (WO #60021541)
Comments: This main replacement project eliminated 150' of 2" bare steel main that was installed prior to 1970. Records indicate 1 class 2 leak was repaired on this section of pipe over the past five years. The project starting and ending points were determined by the by the location of the first known problem area with additional footage required to find adequate tie-in points. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 150' of 2" PE pipe and tied into existing bare steel pipe.  Repair/Replacement Program points for this segment of line were 310.
SR-49: Blanket Service Replacement Liberal/Elkhart (WO #5215109133)
Comments: This blanket work order is for the replacement of services and yard lines. These types of projects typically eliminate leaking pipe and require immediate replacement. The 11 GSR replacements included in this filing are from November 01, 2012 through April 30, 2014.
SR-50: 511 Pine Main Replacement, Liberal/Fowler (WO #60021414)
Comments: This main replacement project eliminated 109' of 2" bare steel main that was installed prior to 1970. Records indicate 1 class 1 leak was repaired on this section of pipe over the past five years. The project starting and ending points were determined by the by the location of the first known problem area with additional footage required to find adequate tie-in points. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 109' of 2" PE pipe and tied into existing bare steel pipe.  Repair/Replacement Program points for this segment of line were 330.
SR-51: Blanket Service Replacement, Liberal/Fowler (WO #5215111133)
Comments: This blanket work order is for the replacement of services and yard lines. These types of projects typically eliminate leaking pipe and require immediate replacement. The 4 GSR replacements included in this filing are from November 01, 2012 through March 31, 2014.
SR-52: Hugoton DRS 1B Replacement, Liberal/Hugoton (WO #60021203)
Comments: This replacement eliminated two 2" Mooney regulators and replaced them with 2" 461 regulators. The Mooney regulator pilot controllers kept freezing up and they had trouble locking up during inspections. This station is one of two feeds into the City of Hugoton.
SR-53: Blanket Service Replacement, Liberal/Hugoton (WO #5215121133)
Comments: This blanket work order is for the replacement of services and yard lines. These types of projects typically eliminate leaking pipe and require immediate replacement. The 15 GSR replacements included in this filing are from November 01, 2012 through April 30, 2014.
SR-54: 2nd and Western Main Replacement, Liberal (WO #60019637)
Comments: This main replacement project eliminated 1,165' of 4" bare steel main that was installed prior to 1950. Records indicate 1 class 3 leak was repaired on this section of pipe over the past five years. Additionally, the main was located under hard surface material. The project starting and ending points were determined by the by the location of the first known problem area with additional footage required to find adequate tie-in points. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 1,185' of 4" PE pipe and tied into existing bare steel pipe.  Repair/Replacement Program points for this segment of line were 330.



**SR-55: 607 W 1st Main Replacement, Liberal (WO #60020514)**

Comments: This main replacement project eliminated 39' of 2" bare steel main that was installed prior to 1970. Records indicate 1 class 2 leak was repaired on this section of pipe over the past five years. Additionally, the main was located under hard surface material. The project starting and ending points were determined by the by the location of the first known problem area with additional footage required to find adequate tie-in points. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 49' of 2" PE pipe and tied into existing bare steel pipe.

Repair/Replacement Program points for this segment of line were 330.

**SR-56 Park and Virginia Main Replacement, Liberal (WO #60020567)**

Comments: This main replacement project eliminated 176' of 1.25" bare steel main that was installed prior to 1970. Records indicate 1 class 2 leak was repaired on this section of pipe over the past five years. Additionally, the main was located under hard surface material. The project starting and ending points were determined by the by the location of the first known problem area with additional footage required to find adequate tie-in points. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 176' of 1" PE pipe and tied into existing PE pipe.

Repair/Replacement Program points for this segment of line were 330.

**SR-57: 117 W Pancake Main Replacement, Liberal (WO #60020623)**

Comments: This main replacement project eliminated 341' of 3" bare steel and 80' of 3" coated main that was installed prior to 1950. Records indicate this line was partially under the building and needed to be relocated/replaced. The project starting and ending points were determined by the by the location of the first known problem area with additional footage required to find adequate tie-in points. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 421' of 4" PE pipe and tied into existing PE and bare steel pipe.

Repair/Replacement Program points for this segment of line were 300.

**SR-58: 2nd and Western Main Replacement, Liberal (WO #60020665)**

Comments: This main replacement project eliminated 705' of 4" and 265' of 1.25" bare steel main that was installed prior to 1950. Records indicate 1 class 2 leak was repaired on this section of pipe over the past five years. Additionally, the main was located under hard surface material. The project starting and ending points were determined by the by the location of the first known problem area with additional footage required to find adequate tie-in points. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 705' of 4" PE pipe and tied into existing PE and bare steel pipe.

Repair/Replacement Program points for this segment of line were 350.

**SR-59: 609 W 2nd Main Replacement, Liberal (WO #60021522)**

Comments: This main replacement project eliminated 234' of 4" and 7' of 2" bare steel main that was installed prior to 1950. Records indicate 1 class 2 leak was repaired on this section of pipe over the past five years. Additionally, the main was located under hard surface material. The project starting and ending points were determined by the by the location of the first known problem area with additional footage required to find adequate tie-in points. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 234' of 4" and 7' of 2" PE pipe and tied into existing bare steel pipe.

Repair/Replacement Program points for this segment of line were 370.

**SR-60: DRS 11 Regulator Replacement, Liberal (WO #60020913)**

Comments: This replacement eliminated one old DRS and replaced it with a standard type setting. The obsolete regulator had lock up and set point problems and parts were no long available. The station provides service to the Liberal low pressure system.

**SR-61: Blanket Service Replacement, Liberal (WO #5215126133)**

Comments: This blanket work order is for the replacement of services and yard lines. These types of projects typically eliminate leaking pipe and require immediate replacement. The 39 GSR replacements included in this filing are from November 01, 2012 through April 30, 2014.

**SR-62: Install Odorizer, Liberal (WO #10049233)**

Comments: Installed new Preco Pump Injection odorizer at the PEPL tap for the newly acquired Anadarko transmission pipeline. This odorizer is now supplying odorant for the City of Liberal and 54 miles of transmission pipeline. The installation eliminated 4 individual odorizers near the city of Liberal and 10 odorizers on the line that was purchased.

**SR-63: Install Regulator, Liberal (WO #10049230)**

Comments: This installation was necessary to create a standard type regulator setting. It supplies gas to the City of Liberal and the 54 miles of the newly acquired Anadarko transmission pipeline. Added a 3" Fisher EZR to existing station to make it a duel run monitor station.

**SR-64: Fowler and Rainbelt Main Replacement, Liberal/Meade (WO #60019544)**

Comments: This main replacement project eliminated 731' of 2" bare steel main that was installed prior to 1970. This was a budgeted project to remove bare steel pipe in Meade area. The project starting and ending points were determined by the by the location of the first known problem area with additional footage required to find adequate tie-in points. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 717' of 2" PE pipe and tied into existing PE and coated steel pipe.

Repair/Replacement Program points for this segment of line were 280.

<p>SR-65: Webb and Hart Main Replacement, Liberal/Meade (WO #60020460)</p>
<p>Comments: This main replacement project eliminated 40' of 2" main that was installed prior to 1970, eliminating the last remaining bare steel pipe in the alley. The project starting and ending points were determined by the by the location of the first known problem area with additional footage required to find adequate tie-in points. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 45' of 2" PE pipe and tied into existing PE pipe.</p> <p>Repair/Replacement Program points for this segment of line were 280.</p>
<p>SR-66: Fowler and Kansas Main Replacement, Liberal/Meade (WO #60020863)</p>
<p>Comments: This main replacement project eliminated 363' of 2" bare steel main that was installed prior to 1970. Records indicate one class 1 leak was repaired on this section of pipe over the past five years. The project starting and ending points were determined by the by the location of the first known problem area with additional footage required to find adequate tie-in points. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 363' of 2" PE pipe and tied into existing PE and coated steel pipe.</p> <p>Repair/Replacement Program points for this segment of line were 330.</p>
<p>SR-67: Blanket Service Replacement, Liberal/Meade (WO #5215128133)</p>
<p>Comments: This blanket work order is for the replacement of services and yard lines. These types of projects typically eliminate leaking pipe and require immediate replacement. The 10 GSR replacements included in this filing are from November 01, 2012 through April 30, 2014.</p>
<p>SR-68: Hwy 56 High School Road Main Replacement, Liberal/Moscow (WO #60021213)</p>
<p>Comments: This main replacement project eliminated 30' of 2" coated steel main that was installed prior to 1970. Records indicate one class 3 leak was repaired on this section of pipe over the past five years. The line was located under hard surface material. The project starting and ending points were determined by the by the location of the first known problem area with additional footage required to find adequate tie-in points. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 80' of 2" PE pipe and tied into existing coated steel pipe.</p> <p>Repair/Replacement Program points for this segment of line were 260.</p>
<p>SR-69 Blanket Service Replacement , Liberal/Moscow (WO #5215130133)</p>
<p>Comments: This blanket work order is for the replacement of services and yard lines. These types of projects typically eliminate leaking pipe and require immediate replacement. The 1 GSR replacements included in this filing are from November 01, 2012 through April 30, 2014.</p>
<p>SR-70: Install Emergency Valves in Plains, Liberal/Plains (WO #60019778)</p>
<p>Comments: This project involved adding two 2" PE underground valves for better isolation for the City of Plains.</p>

SR-71: East 1st and Washington Main Replacement, Liberal/Plains (WO #60019788)
<p>Comments: This main replacement project eliminated 981' of 4" bare and 183' of 2" coated steel main that was installed prior to 1970. This was a budgeted project to remove bare steel pipe and tie two line segments together. The project starting and ending points were determined by the by the location of the first known problem area with additional footage required to find adequate tie-in points. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 1,713' of 2" PE pipe and tied into existing PE and coated steel pipe.</p> <p>Repair/Replacement Program points for this segment of line were 280.</p>
SR-72: 211 Erie Main Replacement, Liberal/Plains (WO #60020893)
<p>Comments: This main replacement project eliminated 400' of 2" bare steel main that was installed prior to 1970. Records indicate one class 3 leak was repaired on this section of pipe over the past five years. The project starting and ending points were determined by the by the location of the first known problem area with additional footage required to find adequate tie-in points. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 400' of 2" PE pipe and tied into existing bare steel pipe.</p> <p>Repair/Replacement Program points for this segment of line were 290.</p>
SR-73: Blanket Service Replacement, Liberal/Plains (WO #5215136133)
<p>Comments: This blanket work order is for the replacement of services and yard lines. These types of projects typically eliminate leaking pipe and require immediate replacement. The 11 GSR replacements included in this filing are from November 01, 2012 through April 30, 2014.</p>
SR-74: 402 Tonkawa Main Replacement, Liberal/Satanta (WO #60021089)
<p>Comments: This main replacement project eliminated 495' of 2" bare steel main that was installed prior to 1970. Records indicate one class 1 and one class 2 leak was repaired on this section of pipe over the past five years. The project starting and ending points were determined by the by the location of the first known problem area with additional footage required to find adequate tie-in points. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 495' of 2" PE pipe and tied into existing PE and coated steel pipe.</p> <p>Repair/Replacement Program points for this segment of line were 360.</p>
SR-75: Blanket Service Replacement, Liberal/Satanta (WO #5215138133)
<p>Comments: This blanket work order is for the replacement of services and yard lines. These types of projects typically eliminate leaking pipe and require immediate replacement. The 9 GSR replacements included in this filing are from November 01, 2012 through April 30, 2014.</p>
SR-76: 202 E Hwy 56 Main Replacement, Liberal/Sublette (WO #60021146)
<p>Comments: This main replacement project eliminated 450' of 2" bare steel main that was installed prior to 1970. Records indicate one class 1 was repaired on this section of pipe over the past five years. The project starting and ending points were determined by the by the location of the first known problem area with additional footage required to find adequate tie-in points. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 450' of 2" PE pipe and tied into existing PE and bare steel pipe.</p> <p>Repair/Replacement Program points for this segment of line were 330.</p>

<p>SR-77: 404 S Inman Main Replacement, Liberal/Sublette (WO #60021215)</p> <p>Comments: This main replacement project eliminated 145' of 4" bare steel main that was installed prior to 1970. Records indicate one class 2 leak was repaired on this section of pipe over the past five years. The project starting and ending points were determined by the by the location of the first known problem area with additional footage required to find adequate tie-in points. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 145' of 4" PE pipe and tied into existing PE and bare steel pipe.</p> <p>Repair/Replacement Program points for this segment of line were 310.</p>
<p>SR-78: 1008 W Lalande Main Replacement, Liberal/Sublette (WO #60021282)</p> <p>Comments: This main replacement project eliminated 20' of 2" coated steel main that was installed prior to 1970. Records indicate two class 2 leaks were repaired on this section of pipe over the past five years. The additional footage was required in order to eliminate 5 customer owned PVC yard lines. The project starting and ending points were determined by the by the location of the first known problem area with additional footage required to find adequate tie-in points. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 990' of 2" PE pipe and tied into existing coated steel pipe.</p> <p>Repair/Replacement Program points for this segment of line were 340.</p>
<p>SR-79: Blanket Service Replacement, Liberal/Sublette (WO #5215142133)</p> <p>Comments: This blanket work order is for the replacement of services and yard lines. These types of projects typically eliminate leaking pipe and require immediate replacement. The 14 GSR replacements included in this filing are from November 01, 2012 through April 30, 2014.</p>
<p>SR-80: Tahoe and Arrowhead Main Replacement, Wichita (60021341)</p> <p>Comments: This replacement project eliminated 973' of 2" bare, 102' of 2" coated steel, 33' of 2" PE, and 397' of 1.25" PE main that was installed prior to 1950. Records indicate that two class 2 leaks were repaired on this section of pipe over the past five years. The project starting point was determined by the location of the first known problem area with additional footage required to find an adequate tie-in point. The same process was utilized for the project ending location, taking into consideration the distance between known problem areas. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 1,505' of 2" PE pipe and tied into 2" coated steel pipe.</p> <p>Repair/Replacement Program points for this segment of line were 390.</p>
<p>SR-81: Green and Estelle Main Replacement, Wichita (WO #60021276)</p> <p>Comments: This replacement project eliminated 334' of 2" bare steel main that was installed prior to 1950. Records indicate that one class 2 leak was repaired on this section of pipe over the past five years. The line was located under hard surface material. The project starting point was determined by the location of the first known problem area with additional footage required to find an adequate tie-in point. The same process was utilized for the project ending location, taking into consideration the distance between known problem areas. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 340' of 2" PE pipe and tied into PE and coated steel pipe.</p> <p>Repair/Replacement Program points for this segment of line were 370.</p>

**SR-82: Red Rock Main Replacement, Wichita/Yoder (WO #60021265)**

Comments: This replacement project eliminated 417' of 2" bare steel main that was installed prior to 1950. Records indicate that two class 2 leaks were repaired on this section of pipe over the past five years. The project starting point was determined by the location of the first known problem area with additional footage required to find an adequate tie-in point. The same process was utilized for the project ending location, taking into consideration the distance between known problem areas. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 417' of 2" PE pipe and tied into 2" bare steel pipe.

Repair/Replacement Program points for this segment of line were 380.

**SR-83: 56th and Pennington Main Replacement, Wichita/Hutchinson (WO #60021212)**

Comments: This replacement project eliminated 1,485' of 4" bare steel main that was installed prior to 1950. Records indicate that one class 2 leak was repaired on this section of pipe over the past five years. The project starting point was determined by the location of the first known problem area with additional footage required to find an adequate tie-in point. The same process was utilized for the project ending location, taking into consideration the distance between known problem areas. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 1,485' of 2" PE pipe and tied into coated steel pipe.

Repair/Replacement Program points for this segment of line were 350.

**SR-84: Line 27 Main Replacement, Wichita/Winfield (WO #60020968)**

Comments: This replacement project eliminated 2,275' of 4" bare steel main that was installed prior to 1950. Records indicate that one class 1 leak was repaired on this section of pipe over the past five years. The project starting point was determined by the location of the first known problem area with additional footage required to find an adequate tie-in point. The same process was utilized for the project ending location, taking into consideration the distance between known problem areas. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 2,291' of 2" PE pipe and tied into coated and bare steel pipe.

Repair/Replacement Program points for this segment of line were 380.

**SR-85: Gow – 10th to 11th Main Replacement, Wichita (WO #60020901)**

Comments: This replacement project eliminated 622' of 1.25" Aldyl A main that was installed prior to 1960. Records indicate that four class 2 leaks were repaired on this section of pipe over the past five years. The project starting point was determined by the location of the first known problem area with additional footage required to find an adequate tie-in point. The same process was utilized for the project ending location, taking into consideration the distance between known problem areas. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 622' of 2" PE pipe and tied into PE pipe

Repair/Replacement Program points for this segment of line were 420.

SR-86: 17th and Arkansas Main Replacement, Wichita (WO #60020844)

Comments: This replacement project eliminated 388' of 2" bare steel main and 126' of Aldyl A that was installed prior to 1950. Records indicate that three class 2 leaks were repaired on this section of pipe over the past five years. The project starting point was determined by the location of the first known problem area with additional footage required to find an adequate tie-in point. The same process was utilized for the project ending location, taking into consideration the distance between known problem areas. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 555' of 2" PE pipe PE pipe.

Repair/Replacement Program points for this segment of line were 420.

SR-87: Baehr – 9th to Elm Main Replacement, Wichita (WO #60020705)

Comments: This replacement project eliminated 1,732' of 2" bare steel main that was installed prior to 1950. Records indicate that six class 2 leaks were repaired on this section of pipe over the past five years. The project starting point was determined by the location of the first known problem area with additional footage required to find an adequate tie-in point. The same process was utilized for the project ending location, taking into consideration the distance between known problem areas. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 1,732' of 2" PE pipe and tied into PE pipe.

Repair/Replacement Program points for this segment of line were 510.

SR-88: 19th and Woodland Main Replacement, Wichita (WO #60020614)

Comments: This replacement project eliminated 660' of 2" bare steel main that was installed prior to 1950. Records indicate that five class 2 leaks were repaired on this section of pipe over the past five years. The project starting point was determined by the location of the first known problem area with additional footage required to find an adequate tie-in point. The same process was utilized for the project ending location, taking into consideration the distance between known problem areas. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 665' of 2" PE and tied into PE pipe.

Repair/Replacement Program points for this segment of line were 470.

SR-89: Buffum and Franklin Main Replacement, Wichita (WO #60020546)

Comments: This replacement project eliminated 654' of 2" and 106' of 4" bare steel main that was installed prior to 1950. Records indicate that three Class 2 leaks were repaired on this section of pipe over the past five years. The project starting point was determined by the location of the first known problem area with additional footage required to find an adequate tie-in point. The same process was utilized for the project ending location, taking into consideration the distance between known problem areas. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 685' of 2" PE and tied into PE pipe.

Repair/Replacement Program points for this segment of line were 420.

**SR-90: 4th and Monroe Main Replacement, Wichita/Sterling (WO #60020404)**

Comments: This replacement project eliminated 508' of 3" bare steel main that was installed prior to 1950. Records indicate that six Class 2 leaks were repaired on this section of pipe over the past five years. The project starting point was determined by the location of the first known problem area with additional footage required to find an adequate tie-in point. The same process was utilized for the project ending location, taking into consideration the distance between known problem areas. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 511' of 4" PE and tied into coated steel pipe.

Repair/Replacement Program points for this segment of line were 500.

**SR-91: Bebe – Central to Newell Main Replacement, Wichita (WO #60020370)**

Comments: This replacement project eliminated 556' of 2" bare steel main that was installed prior to 1950. Records indicate that one Class 2 leak was repaired on this section of pipe over the past five years. The project starting point was determined by the location of the first known problem area with additional footage required to find an adequate tie-in point. The same process was utilized for the project ending location, taking into consideration the distance between known problem areas. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 558' of 2" PE and tied into coated steel pipe

Repair/Replacement Program points for this segment of line were 350.

**SR-92: Spaulding – Franklin to Murdock Main Replacement, Wichita (WO #60020358)**

Comments: This replacement project eliminated 721' of 2" bare steel main that was installed prior to 1950. Records indicate that four Class 2 leaks were repaired on this section of pipe over the past five years. The project starting point was determined by the location of the first known problem area with additional footage required to find an adequate tie-in point. The same process was utilized for the project ending location, taking into consideration the distance between known problem areas. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 741' of 2" PE and tied into PE pipe.

Repair/Replacement Program points for this segment of line were 450.

**SR-93: Doris and 13th Main Replacement, Wichita (WO #60020335)**

Comments: This replacement project eliminated 382' of 3/4" coated steel main that was installed prior to 1950. Records indicate that one Class 2 leak was repaired on this section of pipe over the past five years. The project starting point was determined by the location of the first known problem area with additional footage required to find an adequate tie-in point. The same process was utilized for the project ending location, taking into consideration the distance between known problem areas. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 382' of 2" PE and tied into PE pipe.

Repair/Replacement Program points for this segment of line were 350.



SR-94: Hoover – 9th to Robinson Main Replacement, Wichita (WO #60020326)

Comments: This replacement project eliminated 406' of 2" bare steel main that was installed prior to 1950. Records indicate that two Class 2 leaks were repaired on this section of pipe over the past five years. The project starting point was determined by the location of the first known problem area with additional footage required to find an adequate tie-in point. The same process was utilized for the project ending location, taking into consideration the distance between known problem areas. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 432' of 2" PE pipe. The line is tied to 2" PE at one end of project and 2" PE at other end.

Repair/Replacement Program points for this segment of line were 380.

SR-95: Sedgwick – 14th to 15th Main Replacement, Wichita (WO #60020297)

Comments: This replacement project eliminated 568' of 2" bare steel main that was installed prior to 1950. Records indicate that three Class 2 leaks were repaired on this section of pipe over the past five years. The project starting point was determined by the location of the first known problem area with additional footage required to find an adequate tie-in point. The same process was utilized for the project ending location, taking into consideration the distance between known problem areas. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 568' of 2" PE and tied into PE pipe.

Repair/Replacement Program points for this segment of line were 420.

SR-96: Broadway and Orme Main Replacement, Wichita (WO #60020133)

Comments: This replacement project eliminated 402' of 2" coated steel main that was installed prior to 1950. Records indicate that two Class 2 leaks were repaired on this section of pipe over the past five years. The project starting point was determined by the location of the first known problem area with additional footage required to find an adequate tie-in point. The same process was utilized for the project ending location, taking into consideration the distance between known problem areas. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 402' of 2" PE and tied into coated steel pipe.

Repair/Replacement Program points for this segment of line were 380.

SR-97: Obee and G Ave Main Replacement, Wichita/Obeeville (WO #60020120)

Comments: This replacement project eliminated 120' of 3" coated and wrapped main that was installed prior to 1950. Records indicate that two Class 2 leaks were repaired on this section of pipe over the past five years. The project starting point was determined by the location of the first known problem area with additional footage required to find an adequate tie-in point. The same process was utilized for the project ending location, taking into consideration the distance between known problem areas. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 120' of 4" PE and tied into coated steel pipe.

Repair/Replacement Program points for this segment of line were 380.

<p>SR-98: Pleasantview – 15th to 16th Main Replacement, Wichita (WO #60020097)</p> <p>Comments: This replacement project eliminated 610' of 2" bare steel main and 340' of coated and wrapped main that was installed prior to 1950. Records indicate that one Class 2 leak was repaired on this section of pipe over the past five years. The project starting point was determined by the location of the first known problem area with additional footage required to find an adequate tie-in point. The same process was utilized for the project ending location, taking into consideration the distance between known problem areas. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 1,113' of 2" PE and tied into PE pipe.</p> <p>Repair/Replacement Program points for this segment of line were 350.</p>
<p>SR-99: 4th and Breese Main Replacement, Wichita/Colwich (WO #60020028)</p> <p>Comments: This replacement project eliminated 571' of 2" bare steel main that was installed prior to 1950. Records indicate that one Class 2 leak was repaired on this section of pipe over the past five years. The project starting point was determined by the location of the first known problem area with additional footage required to find an adequate tie-in point. The same process was utilized for the project ending location, taking into consideration the distance between known problem areas. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 571' of 2" PE and tied into PE and coated steel pipe.</p> <p>Repair/Replacement Program points for this segment of line were 350.</p>
<p>SR-100: 50th and Pennington Main Replacement, Wichita/Hutchinson (WO #60019989)</p> <p>Comments: This replacement project eliminated 1,100' of 4" bare steel main that was installed prior to 1950. Records indicate that two Class 2 leaks were repaired on this section of pipe over the past five years. The project starting point was determined by the location of the first known problem area with additional footage required to find an adequate tie-in point. The same process was utilized for the project ending location, taking into consideration the distance between known problem areas. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 1,100' of 2" PE and tied into coated and bare steel pipe.</p> <p>Repair/Replacement Program points for this segment of line were 380.</p>
<p>SR-101: 2nd and Santa Fe DRS Replacement, Wichita (WO #60020689)</p> <p>Comments: This replacement eliminated one old DRS and replaced it with standard monitor type setting. Replaced two 4" American Axial Flow regulators with two 4" Mooney's. The old regulators had set point and lockup problems during annual inspection. This station provides service to the Wichita Downtown low pressure system.</p>
<p>SR-102: 13th and Zoo DRS Replacement, Wichita (WO #60020714)</p> <p>Comments: This replacement eliminated one old DRS and replaced it with standard monitor type setting. Replaced four 4" American Axial Flow regulators with four 4" Mooney's. The old regulators had set point and lockup problems during annual inspection. This station provides service to the east Wichita distribution system.</p>

SR-103: Irving and West DRS Replacement, Wichita (WO #60020715)
This replacement eliminated one old DRS and replaced it with standard monitor type setting. Replaced four 3” American Axial Flow regulators with four 3” Mooney’s. The old regulators had set point and lockup problems during annual inspection. This station provides service to the east Wichita distribution system.
SR-104: McNew DRS Replacement, Wichita/Hutchinson (WO #60020941)
Comments: This replacement eliminated one old DRS and replaced it with standard monitor type setting using two 2” Mooney’s. The old regulators had set point and lockup problems during the annual inspection. This station provides service to South Hutchinson and Morton Salt.
SR-105: Peck DRS Replacement, Wichita/Peck (WO #60020950)
Comments: This replacement eliminated one old DRS and replaced it with standard monitor type setting. Replaced 2” Fisher 99, 243 RPC, and 2” Axial Flow relief with two 2”x 1” Mooney’s. The old regulators had set point and lockup problems during annual inspection. This station provides service to the City of Peck.
SR-106: Americus DRS Replacement, Wichita/Americus (WO #60021102)
Comments: This replacement eliminated one old DRS and replaced it with standard monitor type setting. Replaced two 2” axial Flows and relief with two 2”x 1” Mooney’s. The old regulators had set point and lockup problems during annual inspection. This station provides service to the City of Americus.
SR-107: T1Z Sterling Main Replacement, Wichita/Sterling (WO #10047949)
Comments: This replacement project eliminated 11,500’ of 6” bare steel main that was installed prior to 1950. Records indicate that four Class 1 leaks were repaired on this section of pipe over the past five years. Low Frequency ERW was also identified on this area of pipe. The project starting point was determined by the location of the first known problem area with additional footage required to find an adequate tie-in point. The same process was utilized for the project ending location, taking into consideration the distance between known problem areas. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 11,598’ of 6” and 33’ of 4” coated steel and tied into coated steel pipe.
Repair/Replacement Program points for this segment of line were 350.
SR-108: 29th and Tyler DRS Replacement, Wichita (WO #60019514)
Comments: This replacement eliminated one old DRS and replaced it with standard monitor type setting. Replaced two 4” American Axial Flow regulators and two 2” American Axial Flow regulators with two 3” Mooney’s. The old regulators had set point and lockup problems during annual inspection. This station provides service to the West Wichita 55 distribution system.
SR-109: Pawnee and West DRS Replacement, Wichita (WO #60020017)
Comments: This replacement eliminated one old regulator and replaced it with a new single regulator type setting. Replaced one 2” Fisher 99 regulator with one 2” Mooney. The old regulator had set point and lockup problem during annual inspection. This station provides service to the Pawnee and West area including Farmland Foods.

<b>SR-110: Andale TBS Replacement, Wichita/Andale (WO #60019130)</b>					
Comments: This replacement eliminated one old DRS and replaced it with standard monitor type setting. Replaced a double run where the First run was a 2” Fisher 99 and 2” Axial Flow relief. The second run was a Fisher 99 and a 2” Axial Flow relief. Replaced with two 2” Mooney’s. The old regulators had set point and lockup problems during annual inspection. This station provides service to the City of Andale.					
<b>SR-111: Blanket Service Replacement, Wichita (WO #5215132133)</b>					
Comments: This blanket work order is for the replacement of services and yard lines. These types of projects typically eliminate leaking pipe and require immediate replacement. The 327 replacements included in this filing are from November of 2012 through April 30 of 2014.					
<b>SR-112: Blanket Main Replacement, Wichita (WO #5215132134)</b>					
Comments: This blanket work order is for the replacement of main in various locations. These types of projects typically eliminate leaking pipe and require immediate replacement. The 7 replacements included in this filing are from November of 2012 through April 30 of 2014.					
<b>SR-113: 25% Bare Service Replacement, Wichita (WO #60019579)</b>					
Comments: The 55 bare steel yard lines were replaced in 2013. Corrosion leaks were determined to be the cause by visual inspection and evidence when it was exposed. If the leak location was not exposed, the more stringent safety criterion of “corrosion” was used. We continue to work proactively on non-triggered maps as they could take longer than the required 18 months to replace.					
<b>Map Number</b>	<b>Original Count</b>	<b>Number of Leaks</b>	<b>Percent</b>	<b>Trigger Date</b>	<b>Number Replaced</b>
2750	613	155	25.29	1/11/13	55
<b>SR-114: Litchfield – Franklin to Murdock Main Replacement, Wichita (WO #60019489)</b>					
Comments: This replacement project eliminated 447’ of 2” bare steel, 94’ of 2” and 136’ of 1.25” PE main that was installed prior to 1950. Records indicate that four Class 2 leaks were repaired on this section of pipe over the past five years. The project starting point was determined by the location of the first known problem area with additional footage required to find an adequate tie-in point. The same process was utilized for the project ending location, taking into consideration the distance between known problem areas. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 677’ of 2” PE and tied into PE pipe.					
Repair/Replacement Program points for this segment of line were 450.					
<b>SR-115 Litchfield – Murdock to Franklin Service Replacement, Wichita (WO #60019488)</b>					
Comments: In conjunction with the above noted main replacement (SR-114), 16 service lines and/or yard lines were either replaced or tied over to new main. All bare steel service and/or yard lines were replaced with ½” PE pipe.					

**SR-116: T1Z S30 Main Replacement, Wichita/Hutchinson (WO #10044976)**

Comments: This replacement project eliminated 751' of 8" bare steel main that was installed prior to 1950. The pipe was coupled, shallow and Low Frequency ERW. The project starting point was determined by the location of the first known problem area with additional footage required to find an adequate tie-in point. The same process was utilized for the project ending location, taking into consideration the distance between known problem areas. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 751' of 8" coated steel and tied into coated steel pipe.

Repair/Replacement Program points for this segment of line were 290.

**SR-117: T1A S11 and S22 Main Replacement, Wichita/Nickerson (WO #10047717)**

Comments: This replacement project eliminated 4,224' of 8" bare steel main that was installed prior to 1950. Records indicate that ten Class 3 leaks were repaired on this section of pipe over the past five years. Seam corrosion, Low Frequency ERW and lack of adequate cover was also identified on this area of pipe. The project starting point was determined by the location of the first known problem area with additional footage required to find an adequate tie-in point. The same process was utilized for the project ending location, taking into consideration the distance between known problem areas. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 4,224' of 8" coated steel and tied into coated steel pipe.

Repair/Replacement Program points for this segment of line were 410 and 370.

**SR-118: Vulcan Line Main Replacement, Wichita/Cheney (WO #10047149)**

Comments: This replacement project eliminated 980' of 8" bare steel main that was installed prior to 1950. Records indicate that three Class 2 leaks were repaired on this section of pipe over the past five years. The project starting point was determined by the location of the first known problem area with additional footage required to find an adequate tie-in point. The same process was utilized for the project ending location, taking into consideration the distance between known problem areas. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 980' of 4" PE and tied into bare steel pipe.

Repair/Replacement Program points for this segment of line were 390.

**SR-119: T1Z Wellington S30 & S31 Main Replacement, Wichita/Wellington (WO #10048988)**

Comments: This replacement project eliminated 2,480' of 12" bare steel main that was installed prior to 1950. The pipe was coupled, shallow and Low Frequency ERW. The project starting point was determined by the location of the first known problem area with additional footage required to find an adequate tie-in point. The same process was utilized for the project ending location, taking into consideration the distance between known problem areas. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 2,480' of 12" coated steel and tied into coated steel pipe.

Repair/Replacement Program points for this segment of line were 290.

<p><b>SR-120: T1Z Wichita S24 Main Replacement, Wichita (WO #10049989)</b></p> <p>Comments: This replacement project eliminated 400' of 12" bare steel main that was installed prior to 1950. Records indicate that one Class 2 leak was repaired on this section of pipe over the past five years. The pipe was coupled, Low Frequency ERW and located inside the floodplain of the Big Ditch. The project starting point was determined by the location of the first known problem area with additional footage required to find an adequate tie-in point. The same process was utilized for the project ending location, taking into consideration the distance between known problem areas. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 400' of 12" coated steel and tied into coated steel pipe.</p> <p>Repair/Replacement Program points for this segment of line were 350.</p>
<p><b>SR-121: Line 27 Replacement, Wichita/Winfield (WO #10044821)</b></p> <p>Comments: This replacement project eliminated 1470' of 6" bare steel main that was installed prior to 1950. Records indicate that six Class 3 leaks were repaired on this section of pipe over the past five years. The project starting point was determined by the location of the first known problem area with additional footage required to find an adequate tie-in point. The same process was utilized for the project ending location, taking into consideration the distance between known problem areas. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 1470' of 2" PE and tied into bare steel pipe.</p> <p>Repair/Replacement Program points for this segment of line were 320.</p>
<p><b>SR-122: T1Z Colwich Exposure Replacement, Wichita/Colwich (WO #10045157)</b></p> <p>Comments: Replaced 400' of 10" coated steel that was exposed across drainage canal. This line was exposed due to flooding. The line was replaced with 423' of 10" coated steel and tied into coated steel pipe.</p>
<p><b>SR-123: Levee D Crossing Main Replacement, Wichita (WO #10046935)</b></p> <p>Comments: This replacement project eliminated 596' of 14" bare steel main that was installed prior to 1950. Records indicate that two Class 2 leaks were repaired on this section of pipe over the past five years. The project starting point was determined by the location of the first known problem area with additional footage required to find an adequate tie-in point. The same process was utilized for the project ending location, taking into consideration the distance between known problem areas. Additional consideration was given to the proximity of any existing coated steel or PE pipe. The line was replaced with 535' of 10" and 61' of 12" coated steel and tied into coated steel pipe.</p> <p>Repair/Replacement Program points for this segment of line were 400.</p>
<p><b>SR-124: T1Z Junction at Levee D, Wichita (WO #10043823)</b></p> <p>In conjunction with above noted main replacement (SR-123) a new 10" valve setting was installed to accommodate tie in.</p>
<p><b>SR-125: T1A to T1Z Service Tie Overs, Wichita/Sterling (WO# 10048575)</b></p> <p>Comments: Tied 4 service lines over to line T1Z from line T1A. This allowed us to abandon 7.6 miles of 8" bare steel transmission line.</p>

SR-126: Install Odorizer at Cheney Plant, Wichita/Cheney (WO #10047871)
Comments: Installed new odorizer at Cheney Plant to allow centralized odorization on all transmission systems in Central Kansas. This project eliminated multiple individual customer pot style odorizers.
SR-127: Install Odorizer at Sterling Compressor, Wichita/Sterling (WO #10047872)
Comments: Installed new odorizer at Sterling Compressor to allow centralized odorization on all transmission systems in Central Kansas. This project eliminated multiple individual customer pot style odorizers.
SR-128: Install Odorizer at Hesston Interconnect, Wichita/Hesston (WO #10047900)
Comments: Installed new odorizer at Hesston Interconnect to allow centralized odorization on all transmission systems in Central Kansas. This project eliminated multiple individual customer pot style odorizers.
SR-129: Sterling Ground bed Replacement, Wichita/Sterling (WO #10048413)
Comments: Replaced ground bed due to depletion of existing ground bed.
SR-130: Sterling Feeder Junction Tie Over, Wichita/Sterling (WO #10048593)
Comments: Installed 353' of 6" coated steel and one new valve setting to tie over the Sterling Feeder line. This allowed us to abandon 7.6 miles of 8" bare steel transmission line.
SR-131: North American Salt Tie Over, Wichita/Lyons (WO #10048750)
Comments: Installed 40' of 6" and 34' of 4" coated steel and associated valving to tie over the NAS. This allowed us to abandon 7.6 miles of 8" bare steel transmission line.
SR-132: Install Odorizer at Gossage, Wichita/Nickerson (WO #10048805)
Comments: Installed new odorizer at Gossage Separator to allow centralized odorization on all transmission systems in Central Kansas. This project eliminated multiple individual customer pot style odorizers.
SR-133: Rectifier #44 Replacement, Wichita/Maize (WO #10049199)
Comments: Replaced ground bed due to depletion.
SR-134: Rectifier #45 Replacement, Wichita/Maize (WO #10049200)
Comments Replaced ground bed due to depletion.
SR-135: Rectifier #36 Replacement, Wichita/Sterling (WO #10049201)
Comments: Replaced ground bed due to depletion.
SR-136: South Haven Ground Bed Installation, Wichita/S Haven (WO #10049205)
Comments: Installed rectifier and ground bed to protect 16" transmission line T1Z.
SR-137: Wellington Ground Bed Installation, Wichita/Wellington (WO #10049226)
Comments: Installed rectifier and ground bed to protect 16" transmission line T1Z.
SR-138: Hesston Valve Replacement, Wichita/Hesston (WO #10049510)
Comments: Replaced valve due to non-operational emergency valve.

**Relocation Projects:**

- Black Hills works closely with and in partnership with all governmental agencies to ensure timely and effective relocation of gas facilities to allow completion of public works projects. The design decisions are generally a size-for-size rerouting of our facilities done in a way to minimize construction costs; any upgrading or additional replacement work would be an exception and would be noted as such. These projects generally include service line tie over or replacement costs.

➤ **Project Summaries (Relocation)**

R-1: E. 23 <sup>rd</sup> St (K-10 Highway) Bridge Replacement, Lawrence (WO #60018054)
Comments: This gas main relocation along E. 23 <sup>rd</sup> St (K-10 Highway), east of Barker Ave was mandated by KDOT due to highway improvements and the replacement of the bridge which crossed over the Haskell Rail Trail. A total of 1,472' of 4" PE main & 884' of 2" PE was installed to clear conflicts with the improvements.
R-2: E. 8 <sup>th</sup> & Pennsylvania St – 6" & 2" Main Relocation, Lawrence (WO #5215099134)
Comments: This gas main relocation at the southwest corner of East 8 <sup>th</sup> & Pennsylvania St was mandated by the City of Lawrence due to street & storm sewer improvements. A 16' section of 6" coated & wrapped steel and 104' of 2" PE gas main had to be lowered because it was in conflict with the location of a new storm sewer line
R-3: Iowa St (U.S. Highway 59) – Harvard Rd to Bob Billings Pkwy, Lawrence (WO #60019286)
Comments: This gas main relocation along Iowa St (U.S. Highway 59) was mandated by KDOT & the City of Lawrence due to street, waterline and storm sewer improvements between Harvard Rd & Bob Billings Pkwy. A total of 2,530 feet of 4" PE main was installed to clear conflicts with the improvements.
R-4: South Lawrence Traffic way – Haskell Ave Project, Lawrence (WO #60021083)
Comments: This gas main relocation along Haskell Ave & W. 31st St was mandated by KDOT due to conflicts with the construction of the new K-10 Highway. A total of 2,000' of 4" and 10' of 2" PE main was installed to clear conflicts with the improvements.
R-5: W. 23rd (K-10 Highway) & Iowa St, Lawrence (WO #60021170)
Comments: This gas main relocation at the intersection of Iowa St (U.S. Highway 59) & W 23rd St (K-10 Highway) was mandated by KDOT due to conflicts with street & infrastructure improvements. A total of 1,200 feet of 4" PE main was installed to clear conflicts with the improvements.
R-6: 29 <sup>th</sup> St – Ridgeport to Hoover Relocation, Wichita (WO #60021112)
Comments: This main relocation was required by the City of Wichita due to street & storm sewer reconstruction. A total of 3,111' of 4" PE and 255' of 2" PE was installed to clear conflicts with the improvements.



**R-7: Greenwood Avenue Relocation, Dodge City (WO #60021066)**

Comments: This main relocation was required by the City due to milling and asphalt overlay project. A total of 446' of 2" PE was installed to clear conflicts with the improvements.

**R-8: 34<sup>th</sup> & Hoover DRS Install, Wichita (WO #60021119)**

Comments: This DRS installation was required by the City of Wichita due to street & storm sewer reconstruction. The new DRS was installed due to varying MAOP's in conjunction with project R-6 listed above.